THE EXTENSION HORTICULTURIST

December 1, 1921.

Albany Conference. - This number of the "Extension Horticulturist" is devoted mainly to a report of the informal conference of vegetable specialists held at Albany, New York, on the afternoon and evening of October 31, preceding the convention of the Vegetable Growers' Association of America. This conference was suggested with a view to having those interested in extension work and who could attend the vegetable growers' convention meet together to consider some of the main problems confronting the vegetable specialists. The attandance at the conference was small, as will be seen by the list of those present, but the discussions brought out very forcibly the limitations of vegetable extension work and the insufficiency of proven experimental data bearing upon the problems in horticulture. The need for a more sympathetic and closer working relation between the extension and the investigational forces was emphasized throughout the conference.

The Farm Orchard. - As a result of our September appeal for opinions on saving the home orchard, we hawe had only four letters, these appeared in the October number. Are we to conclude that the other fruit specialists are not interested in saving the home orchards? Let us have a few more opinions on this important subject.

Spray Rings. - Let us have a report on the spray rings of 1921. Wisconsin reports 11 power sprayer rings and 11 hand sprayer rings, including 181 orchards.

Apple Growers Tours. - Do not fail to read the letter from Prof. Cruickshank on Ohio apple growers tour appearing in this issue.

Are you going to bring up for discussion fruit extension problems at the meeting of the American Pomological Society at Toledo, Ohio, Dec. 7 to 9 inclusive?

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Office of Horticultural and Pomological Investigations
and States Relations Service Cooperating.
U. S. Department of Agriculture,
Washington, D. C.

Specialists Conference at Albany.

The conference of extension specialists, teachers and experiment station workers that assembled in Albany on October 31st, preceding the regular convention of the Vegetable Growers' Association of America, was informal in character and was devoted mainly to discussions of contacts and methods of conducting horticultural extension work. Those present were Dean Watts and W. B. Nissley of Pennsylvania, H. F. Tompson of Massachusetts, H. C. Thompson, Paul Work, H. W. Schneck, H. S. Mills and W. E. Loomis of New York, W. T. Tapley of Minnesota, H. A. Jones of Maryland, Dr. Hartwell of Kingston, Rhode Island, A. B. Graham and W. R. Beattie of Washington, D. C.

During the afternoon, "The Past, Present and Future of Vegetable Extension Work," was discussed by Prof. A. B. Graham of the Washington extension office, who called particular attention to the importance of demonstration work in connection with the farm home vegetable garden. During the discussion there was pointed out very forcibly the fact that the vegetable specialist is largely dependent on subject matter departments other than horticultural in the conduct of his work. Prof. Graham made a point of the opportunity afforded the technical investigator or subject matter head of any department whose work is closely related to that of the horticultural extension specialist for getting his work across by extending it through the horticultural specialist and that the subject matter heads are not justified in zealously and jealously constructing a fence around their work. This is especially true of control measures that have been thoroughly worked out experimentally. Prof. Graham made a plea for the formation of closer contacts between specialists and subject matter workers.

During the evening Prof. H. F. Tompson of Massachusetts very ably discussed the relation of vegetable extension work to experimental work, pointing out very forcibly the deficiency of experimental data and results upon which vegetable extension work may be based. As an illustration of this point, Prof. Tompson cited a number of cases where vegetable demonstration work had fallen short of its objective on account of the experimental work not being sufficiently completed. Prof. Tompson also stated that the experiments being conducted at the Lexington, Massachusetts Vegetable Station, were proving the best demonstrations and were being accepted to a large degree by the vegetable growers of the Massachusetts district. Prof. Tompson said in part, "The first work of the extension specialists should be to determine the principal problems of that branch of agricultural business with which they are concerned. It is necessary for the specialist to orient himself, find out what is to be done and how to do it. There has been great joy on the part of many a conscientious extension worker when problems of the farm have been discovered on which the investigation and research worker could shed light. This search by college trained specialists for the problems of the farm has been productive of much good and it has vitalized very branch of professional agricultural endeavor. The work has consisted of, first, a recognition of the lack of deserved progress, second, a careful study to determine the specific causes, third, the application of remedies already at hand and, fourth, the stimulation of research and assistance in directing this search for answers to unsolved problems.

The extension worker must be a man who adds to the efficiency of the producer. He must be able to find the answers to questions which constantly arise and stimulate the investigation of problems considered solved, but where experience has proved that common practice is less profitable than new or unaccepted methods. The work of the extension specialist in vegetable gardening must be to assist the development of the commercial vegetable growers business along sound and economic lines. Campaigns or projects must be founded on the right principles, well determined facts, or established and successful practices. In his work, the specialist frequently comes upon questions for which he can find no adequate answer. These often are of long standing. The research man has recognized the the particular problem and indicated the need for investigation, but this is as far as the matter has gone. Happily, in some instances, these experiences have resulted in a get-together of extension workers with experiment station investigators. This has been a great help to both, as the extension specialist has a greater opportunity for public service than does the research man. He may be compared to the man who goes out from a business house to sell goods while his partner remains at the factory and produces the article of merit which makes it possible for the man on the road to sell with pleasure and profit. There must be team work to make the business succeed, so it is with the extension worker and research man.

Today the extension specialist is discovering unsolved problems at an alarming rate and is even inclined to become a little impatient with the progress of the research man. It is often true that our research workers underestimate the importance of the economic problem as compared with so called "pure research," from which no immediate economic gain is in sight. My own feeling is that the economic problems should have the right of way for the matter goes back to our great big problem, the business success of agriculture, for the success of our nation is founded on the success of its agriculture.

The experiment stations are being deluged with problems which are being pressed for solution and it is for the extension forces to lend their best service to a complete and full understanding and to get adequate support for the work. The research man often feels the lack of appreciation for his work on account of his not coming in contact with the work in the field. There has been a tendency on the part of some investigators to feel that the extension man was making himself a censor, that his knowledge was cursory, not thorough or fundamental. It is my belief that within the past year or two there has grown up a better understanding between each branch of the service. Business moves rapidly. Often investigation goes slowly. To the real scientist nothing is proven until it is proven. Our extension forces must make it their business to recognize the essential nature of agricultural research. In my judgment they must do more and pass this feeling of its importance to those who control the pursestrings of the states so that our unsolved problems may have adequate support.

Extension specialists in vegetable gardening are comparatively few in number and in the past there has been little demand for this class of work. Today the demand is increasing and the extension worker soon discovers the need for further research before the various problems can be solved. The funds available for research are limited and it is necessary to work out a program which will recognize problems in their order of economic importance. We are trying to do this in Massachusetts. We con-

sider the problems of maintaining soil productivity a principal one. A study of the census shows that the decrease in the number of horses in Massachusetts from 1910 to 1920 is such that 13,000 less acres can be provided with 20 tons per acre of manure. It will require a cash expenditure of from $1,200,000 to $1,400,000 to replace the plant food formerly obtained from this supply of stable manure to say nothing of the organic matter lost. Here is a real problem for investigation.

The relationships between extension and research workers must be both intimate and sympathetic, if our service institutions in which most of us are laborers, are to render the service which the public welfare requires and which we are now bound to give.

"The Relation of Vegetable Extension Work to Vegetable Teaching," was discussed by Prof. H. C. Thompson of the College of Agriculture of New York at Cornell University. Prof. Thompson stated that, in his judgment, both were teaching in the truest sense of the word, but that they were different types or kinds of teaching; that the class room teacher must necessarily be more technical in his treatment of the subject and go very much more into the details and underlying principles than does the extension teacher. He pointed out also that the extension teacher or specialist must avoid technicalities to a certain degree and must teach his subject in a way that those that he is attempting to reach can fully understand. The discussion naturally evolved into an analysis of what constitutes a good teacher, either in the class room or in the field, and a number of the problems and difficulties that surround both lines of work were discussed, prominent among these difficulties being the lack of adequate textbooks for classroom teaching in vegetable gardening, also the need for a better class of outlines and published information for use in the field. Under the head of laboratory instruction, the value and type of laboratory exercises or field demonstrations was pretty fully discussed. In the opinion of those present it is essential that the actual work both of the laboratory exercises and the field demonstration should be done by the students or cooperators themselves, in order that they get the full benefit therefrom.

Prof. Tapley of Minnesota gave an interesting discussion on the subject of "What Constitutes a Proven Demonstration," but the general consensus of opinion of those present was that investigational work in vegetable lines needs pushing in order to supply material for demonstration work.

Mr. W. R. Beattie of the Washington office briefly pointed out some of the points of contact and correlation in vegetable extension work. It was shown that the vegetable extension man is largely dependent upon the application of proven principles and practices in lines other than his own, for example, control measures with plant diseases and insects form an important part of the vegetable extension man's work. Recently there have developed some exceptional contacts with lines of work hitherto having little or no apparent connection with vegetable work. For example, the greenhouse vegetable growers in certain sections have resorted to the plan of keeping a small herd of dairy cows to supply the manure needed in their vegetable forcing work. The growers of peas and sweet corn for canneries have constructed silos and gone into stock feeding as a means of utilizing waste products and of maintaining soil fertility. Numerous other contacts just as remote as these have developed. Cooperation between the vegetable specialist and the local health authorities being one of the most recent.

Another phase of the grouping of extension work is that of the state extension specialists themselves along geographic and problem lines. For example, the specialists working in the states of the Great Lakes region have certain vegetable problems that apply to all. Other sections or groups of states have similar problems which can be handled to the greatest advantage, if the specialists work cooperatively and apply the same general methods throughout the territory.

The round table discussion led by Dean Watts of Pennsylvania State College on methods of conducting vegetable work was praticipated in by practically all those present. Dr. Hartwell gave an account of the methods of conducting experimental work at the Rhode Island Station, especially those of soil fertility maintenance. These experiments are handled in such a manner that the results speak for themselves and are so plain that they serve as a definite piece of demonstration work. Dr. Hartwell stated that the methods used and results obtained are being followed by the growers, not only of his own state, but of surrounding states as well. This brought up a discussion of what constitutes a demonstration and the relation of experimentation to demonstration. H. F. Tompson of Massachusetts stated that the work being conducted at the Lexington Field Station, which is both of an experimental and demonstration character, is the most potent factor in the acceptance of improved methods and proven principles on the part of the vegetable growers of the whole Boston district.

H C. Thompson of New York advocated the confining of demonstrations to a few definite and conclusive ones then spread the ideas from these. Mr. Thompson cited their work at Williamson as the best example. In this case vast differences were shown and the growers have begin to recognize these differences and apply the improved methods. In a demonstration of onion smut control at Canastota, New York, the treated plot yielded 400 bushels as against 200 bushels on the untreated plot. The growers were not slow to perceive this difference. Prof. Watts referred to the use of local demonstration farms scattered over the state and stated that they had found these farms satisfactory, because they were under control. Mr. Waid spoke of the work conducted on the Washington County, Ohio, demonstration farm and stated that the influence of this farm had been felt all over southern Ohio.

It was the consensus of opinion of those attending the conference that vegetable specialists should confine their efforts to a few well chosen lines of demonstration and make the results of these stand out very prominently, also that investigational work with vegetables needs pushing in order to supply material for demonstration work. A close working relation between the vegetable specialist and the teaching and experimental forces is always desirable and, last, but not least, a closer relation between the extension workers of the different states where common problems exist.

Meeting of Vegetable Growers.

During the regular meeting of the Vegetable Growers' Association of America, many points were brought out that have an important bearing upon extension work in vegetable gardening. This was especially true with regard to the present seed situation and in the matter of securing reliable sources of seed for the use of vegetable growers. The importance of correlation of insect and disease control measures with the work of the vegetable

extension specialist was also very forcibly expressed in a number of the addresses and discussions. The discussions brought out the fact that the vegetable specialist has before him a broad and legitimate field for demonstration work along the line of improvement of varieties of vegetables, better cultural methods, including the maintenance of soil fertility, and above all a close working arrangement with the pathologists and entomologists of the college and experiment station.

Results of vegetable extension work in New Jersey were graphically shown in the form of an exhibit staged by Mr. C. H. Nissley, Extension Specialist, assisted by Mr. Eldred, County Agent of Atlantic County and others. Sprayed and unsprayed celery were shown by contrast, also samples of special varieties of celery that withstand blight. The results obtained in sweet potato seed certification and the demonstrations of the value of new varieties of sweet potatoes for New Jersey conditions constituted an important part of the exhibit.

A letter from Prof. Cruickshank of Ohio, dated October 31, 1921.

"The "Extension Horticulturist" may be interested in a statement concerning our recent trip to the cooperative apple packing houses in western New York. Mr. Beach and I have been talking this thing for some time and we organized the trip with the idea of letting Ohio growers see with their own eyse just how the community houses were operating. Sixty-five growers representing 19 fruit growing counties and over 4,000 acres of orchard made the trip. We left Cleveland by boat Sunday night, spent Monday and Tuesday in New York State and returned from Buffalo Tuesday night. We saw 8 packing houses, severay by-product plants and three equipment and supply manufacturing concerns.

Our growers were entirely sold on the community packing house idea. Shortly after our return, we were able to have representatives of fruit growing counties adopt a constitution for local packing house associations. The delegates thought it would be possible to organize enough of these locals during the next year to warrant attempting a state wide organization.

We feel that these two days of demonstration accomplished more than 2 years of talk would. In addition, the newspapers of the state are giving us some excellent publicity, including news articles, leading editorials and cartoons."

Photograph.

A photograph of a splendid demonstration fruit exhibit has been received from Prof. F. R.Gifford, Extension Pomologist in Wisconsin. Besides showing the difference in size and quality of sprayed and unsprayed apples, a new feature is added, namely, 11 apple pies made from half a peck of sprayed and graded apples are shown in contrast with 6 apple pies made from half a peck of unsprayed apples. In each case a half peck measure of apples similar to those used in the pies stands by each lot of pies. The pies speak louder than words. We would like to receive photographs of this kind from other state workers.

W. R. Beattie,
Extension Horticulturist.

C. P. Close,
Extension Pomologist.